

REMARKS

Claims 1-7 and 9-15 are currently pending in the application, as amended. Claim 1 has been amended to delete the recitation deemed by the Examiner to be new matter and to overcome the rejection for indefiniteness. Claim 1 has been further amended to recite a speed-reducer, a drive assembly, and a brake assembly, each formerly recited as limitations in claim 2. Claim 2 has been amended to properly refer to these limitations as antecedents. Claim 3 has been amended to depend from claim 1 and has been further amended to delete as a limitation that the brake assembly is arranged coaxially with the speed reducer and drive assembly. Claim 4 has been amended to depend from claim 10. Claim 5 has been amended to depend from claim 1 and has been further amended to recite that the speed reducer is arranged radially inwardly of the sheave. Support for this amendment is found in Fig. 1. Claim 6 has been amended to depend from claim 1. Claim 7 has been amended to properly refer to the antecedent limitations of claim 1. Claim 7 has been further amended to delete as a limitation that the brake assembly is mounted on a single input shaft with the speed reducer and drive assembly and that the speed reducer and drive assembly are mounted adjacent to one another. Support for this amendment is found in Fig. 1. Claim 8 has been cancelled. New claims 9-15 depending directly or indirectly from claim 1 have been added. Support for new claims 9-15 is found in the specification at page 4, lines 3-11 and in Fig. 1. No new matter has been added with this amendment.

Claim Rejections – 35 U.S.C. § 112, first paragraph

The Examiner has rejected claims 1-7 under 35 U.S.C. § 112, first paragraph as containing new matter. The Examiner has stated that there is no support in the specification for the limitation that the horizontal cross-sectional area of the shielding body is less than the horizontal cross-sectional area of the cage. Applicants have amended claim 1 to delete this limitation. Accordingly, Applicants respectfully submit that claims 1-7 are in full compliance with the requirements of 35 U.S.C. § 112, first paragraph and request that the rejection of claim 1 and claims 2-7 depending therefrom be withdrawn.

Claim Rejections - 35 U.S.C. § 112, second paragraph

The Examiner has rejected claims 1-7 under 35 U.S.C. § 112, second paragraph as being indefinite. The Examiner contends that the wording of claim 1 recites as limitations that

the shielding is both permanently attached to the building and readily detachable from the building. Applicants have amended claim 1 to recite that the shielding body is “installed on a rooftop of a building” and is “readily detachable from said rooftop.” Accordingly, Applicants respectfully submit that claims 1-7 are in full compliance with the requirements of 35 U.S.C. § 112, second paragraph and request that the rejection of claims 1-7 be withdrawn.

Claim Rejections - 35 U.S.C. § 102 – Claim 1

The Examiner has rejected claim 1 under 35 U.S.C. § 102(b) as being anticipated by European Patent No. 646,537 (Hakola). The Examiner states that Hakola discloses each and every element of claim 1. Applicants respectfully traverse the rejection in view of the foregoing amendment.

Independent claim 1 is directed to an elevator apparatus and, as amended, recites in pertinent part:

a shielding body for shielding said actuating device, wherein the sheave, **a speed reducer**, a drive assembly and **a brake assembly** are integrated in the actuating device,

wherein said actuating device and said shielding body are installed on a rooftop of a building in which said ascending and descending cage is disposed, said shielding body being **readily detachable from said rooftop**.

As noted above, claim 1 has been amended to recite limitations previously recited in claim 2.

Hakola does not disclose each and every feature of claim 1, as amended. Hakola fails to disclose at least a speed reducer and a brake assembly as recited in claim 1. Hakola further fails to disclose a shielding body which is readily detachable from a building rooftop. Hakola discloses a machine room module 1 comprising a base 2 and hoisting machinery 4. The hoisting machinery 4 comprises a motor 8, a gear system 10 and a traction sheave 12, but Hakola does not disclose that the hoisting machinery further comprises a speed reducer and a brake assembly. Hakola further discloses walls 48 and a ceiling 49 enclosing the module 1. Hakola does not disclose the walls 48 and ceiling 49 being readily detachable from a rooftop. Accordingly, Applicants respectfully submit that independent claim 1 is not anticipated by Hakola and request that the rejection of claim 1 under 35 U.S.C. § 102(b) be withdrawn.

Claim Rejections - 35 U.S.C. § 103 – Claims 1-3 and 5-7

The Examiner has rejected claims 1-3 and 5-7 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,615,864 (Liebetrau *et al.*, hereinafter “Liebetrau”) in view of Hakola. The Examiner contends that Liebetrau shows the basic claimed elevator actuating device, with the exception of not specifying how the device is mounted to the building and elevator shaft. The Examiner further contends that Hakola shows a method of installing an elevator which includes shielding attached to the rooftop of a building. The Examiner states that it would have been obvious to one of ordinary skill in the art to install the elevator actuator of Liebetrau as taught by Hakola. The Examiner further states that the size of the shielding would have been an obvious design consideration, within the level of routine skill in the art. The Examiner states that the speed-reducer, drive assembly and brake of Liebetrau are arranged coaxially as recited in claim 3. The Examiner further states that an output wheel of the speed-reducer constitutes the sheave recited in claim 5 and that the mounting of the support is to an upper surface of the rooftop, as recited in claim 6. Applicants respectfully traverse this rejection.

Liebetrau discloses an elevator hoist apparatus including an electric motor 9, a reduction gear assembly 8, a brake assembly 10 and a drive pulley 6. These components are mounted such that they share a common central axis. The Examiner admits that Liebetrau does not disclose an elevator hoist installed on a rooftop of a building nor does Liebetrau disclose a shielding body. As discussed above, claim 1 recites as a limitation a shielding body “readily detachable from said rooftop.” Consequently, Liebetrau does not teach an elevator apparatus installed on a rooftop of a building, having a shielding body which is readily detachable from the rooftop. Accordingly, there is no objective teaching in Liebetrau that would enable one of ordinary skill in the art to modify the invention of Liebetrau in a manner that would render the present invention obvious under 35 U.S.C. § 103(a).

The disclosure of Hakola is discussed above. As noted, Hakola does not disclose a shielding body which is readily detachable from a rooftop of a building. Accordingly, there is no objective teaching in Hakola that would enable one of ordinary skill in the art to modify the invention of Hakola in a manner that would render the present invention obvious under 35 U.S.C. § 103(a).

Liebetrau and Hakola are not properly combinable under 35 U.S.C. § 103(a) to render the present invention obvious. However, even if Liebetrau and Hakola were combined, the combination would not render the present invention obvious. The combination of Liebetrau and Hakola fails to disclose at least a shielding body readily detachable from a rooftop. As the combination of references fails to teach or suggest all of the elements of claim 1 of the Applicants' invention, it is respectfully submitted that a *prima facie* case for obviousness has not been established with respect to claim 1 or with respect to claims 2, 3 and 5-7, as amended, which depend directly or indirectly from claim 1. Accordingly, Applicants respectfully request that the rejection of claims 1-3, and 5 -7 under 35 U.S.C. § 103(a) be withdrawn.

Claim Rejections - 35 U.S.C. § 103 – Claims 1, 3, 4 and 6

The Examiner has rejected claims 1, 3, 4 and 6 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,230,844 B1 (Latorre) in view of Hakola. The Examiner contends that Latorre shows the basic claimed elevator actuating device, with the exception of being mounted in an elevator shaft, not in a shielding on a rooftop. The Examiner further contends that Hakola shows a method of installing an elevator which includes shielding attached to the rooftop of a building. The Examiner states that it would have been obvious to one of ordinary skill in the art to install the elevator actuator of Latorre as taught by Hakola. The Examiner further states that the size of the shielding would have been an obvious design consideration, within the level of routine skill in the art. In view of the foregoing amendment, Applicants respectfully traverse this rejection.

Latorre discloses a rope traction elevator apparatus including a drive assembly including a motor 1 and a gear 2. The apparatus further includes a brake assembly. As admitted by the Examiner, Latorre does not disclose an elevator hoist installed on a rooftop of a building nor does Latorre disclose a shielding body. Consequently, Latorre does not teach an elevator apparatus installed on a rooftop of a building, having a shielding body which is readily detachable from the rooftop. Accordingly, there is no objective teaching in Latorre that would enable one of ordinary skill in the art to modify the invention of Latorre in a manner that would render the present invention obvious under 35 U.S.C. § 103(a).

As discussed above, Hakola does not disclose a shielding body which is readily detachable from a rooftop of a building. Latorre and Hakola are not properly combinable under 35 U.S.C. § 103(a) to render the present invention obvious. However, even if Latorre and Hakola were combined, the combination would not render the present invention obvious. The combination of Latorre and Hakola fails to disclose at least a shielding body readily detachable from a rooftop. As the combination of references fails to teach or suggest all of the elements of claim 1 of the Applicants' invention, it is respectfully submitted that a *prima facie* case for obviousness has not been established with respect to claim 1 or with respect to claims 3, 4 and 6, as amended, which depend directly or indirectly from claim 1. Accordingly, Applicants respectively request that the rejection of claims 1, 3, 4 and 6 under 35 U.S.C. § 103(a) be withdrawn.

Claim Rejections - 35 U.S.C. § 103 – Claim 8

The Examiner has rejected claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Liebetrau in view of Hakola. Applicants have cancelled claim 8, rendering the rejection moot.

New claims 9-15

Applicants have added new dependent claims 9-15 each of which depends directly or indirectly from claim 1. New claim 9 recites that the brake assembly overlaps with the speed reducer, drive assembly and sheave in a direction perpendicular to an axial direction of said brake assembly. New claims 12 and 15 recite that the brake assembly is arranged coaxially with the driving assembly. Support for claims 9, 12 and 15 is found in Fig. 1. New claim 10 recites that the drive assembly includes a rotary disc, a rotor and a stator. New claims 11 and 14 recite that the elevator apparatus comprises an encoder. Claim 13 recites that the drive assembly further includes an input shaft and a supporting member. Support for new claims 10, 11, 13 and 14 is found in Fig. 1 and also in the specification at page 4, lines 3-11:

[t]he motor assembly 10 has, in a housing 11 of the motor assembly 10, a coil 12, a stator 13 disposed adjacent to the coil 12, a rotor 14, a rotary disc 15 fixed to the rotor 14 and having its center part splinedly connected to the input shaft 21 to rotate therewith, and an encoder 16 for detecting number of the rotation

of the input shaft 21. The housing 11 is fixed to a support member 22 of the speed-reducer 20. The support member 22 is attached to an upper face of a rooftop 50 of a building which will be described later.

Applicants submit that the cited references, individually or in the combinations proposed by the Examiner, fail to teach, suggest or disclose an elevator apparatus as described by claims 9-15. Accordingly, Applicants respectfully request allowance of new claims 9-15.

CONCLUSION

In view of the foregoing amendment and remarks, Applicants respectfully submit that the present application, including claims 1-7 and 9-15, is in condition for allowance and such action is respectfully requested.

Respectfully submitted,

HIROYUKI MIYOSHI *et al.*

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By: Richard A. Woldin

RICHARD A. WOLDIN

Registration No. 39,879

AKIN, GUMP, STRAUSS, HAUER & FELD, L.L.P.

One Commerce Square

2005 Market Street - Suite 2200

Philadelphia, PA 19103

Telephone: 215-965-1200

Direct Dial: 215-965-1296

Facsimile: 215-965-1210

E-Mail: rwoldin@akingump.com

RAW/KBG:cbf